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# (12) United States Patent

## Feinstein

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### (54) VIEW NAVIGATION AND MAGNIFICATION OF A HAND-HELD DEVICE WITH A DISPLAY

(76) Inventor: David Y. Feinstein, 5209 Braeburn,

Bellaire, TX (US) 77401

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(51)	Int. Cl. <sup>7</sup>		G09G	5/00
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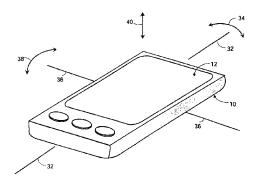
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Primary Examiner—Alexander Eisen (74) Attorney, Agent, or Firm—Akin Gump Strauss Hauer

#### (57) ABSTRACT

System and method for view navigation and magnification of the display of hand-held devices in response to the orientation changes along only two axes of rotation as measured by sensors inside the devices. The view navigation system is engaged and controlled by a single hand which simultaneously presses two ergonomically designed switches on both sides of the hand-held device. In other embodiments, the system engaged into the view navigation mode in response to an operator command in the form of a finger tap, or a voice command, or predefined user gestures. The response curve of the view navigation to sensed changes in orientation is dynamically changing to allow coarse and fine navigation of the view. Various methods are described to terminate the view navigation mode and fix the display at the desired view. Miniature sensors like accelerometers, tilt sensors, or magneto-resistive direction sensors sense the orientation changes. The system can be added to an existing hand-held device via an application interface of the device.

## 36 Claims, 14 Drawing Sheets



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